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Monograph

Commonwealth of Massachusetts

COLLECTION
APR 01 1993

Edward J. King, Governor
George S. Kariotis, Secretary of Economic Affairs
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Department of Commerce

A BUSINESS SERVICE OF MASSACHUSETTS DEPARTMENT OF COMMERCE

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I. GENERAL INFORMATION

1. Official Name — Commonwealth of Massachusetts

   a. State Capital — Boston

2. Location — Northeastern sector of the continental United States bordered by the states of Vermont and New Hampshire on the north, the Atlantic Ocean on the east, the states of Rhode Island and Connecticut on the south and the state of New York on the west. The State House cupola in Boston is at latitude 42°21'29.036", longitude 71°03'51.075".

3. Population

1950: 4,690,514		1980: 5,737,037
1955: 4,837,645		
1960: 5,149,834		
1965: 5,295,281*		
1970: 5,689,179	*In general, the military and	
1975: 5,789,478*	students boarding at schools were not included:	

   a Population Rank: 10th of the 50 states

   b.Cities over 80,000 (1980): Boston(592,994), Worcester(161,799), Springfield(152,319), New Bedford(98,478), Cambridge(95,322), Brockton(95,172), Fall River(92,574), Lowell(92,418), Quincy(84,743), Newton(83,622).

4. Area in Sq. Miles: Land-7,838,68, Water-254.34,Total-8,093.02

   a. Area,Rank: 45th of the 50 states

5. Density, (Persons per square mile)

	Land Area	Total Area
1950:	598	580
1955:	617	598
1960:	657	636
1965:	676	654
1970:	726	703
1975:	739	715
1980:	732	709

   a. Density, Rank: 3rd of the 50 states -Land area and Total Area

6. Income(Personal)

   a.Total: $64,248,000,000(1981) 10th in U.S.

   b.Per Capital: $11,128(1981) 12th in U.S.

7. Climate:

	Boston	Pittsfield	Worcester
a.Normal Temp in Jan.	29.9°F	21.8°F	25.9°F
b.Normal Temp in July	73.7°F	67.8°F	70.6°F
c.Normal Annual Prec.	42.8 inch	44.4 inch	45.4 inch

8.	Elevation	From sea level in the east to 3,491 feet(Mt. Greylock in the town of Adams) northwestern Massachusetts.
9.	Geographic Center:	Southern sector city of Worcester
10.	Topographical Characteristics:	The state is divided into 7 geographic regions. From east to west:a)Cape Cod-flat, nearly at sea level with many lake or pond filled depressions: 2)Boston Basin-gentle contour with tear-drop shaped hills(drumlins) below 250 feet: 3)Seaboard Lowland-flat to gently rolling with 1,000 to 2,000 foot elevations; 4)New England upland-rolling to hilly plateau with 1,000 to 2,000 foot elevations, largest of the regions which straddles the;5)Lower Connecticut Valley-flat to gently rolling with less than 100 to 400 foot elevations; 6)Berkshire Hills-rough rolling upland of a general elevation of 2,000 feet and 7) Green Mountains and Foot Hills-rugged and mountainous with 1,500 to 3,000 foot elevations. The land surface has 24 drainage basins -along the east coast: Parker, Ipswich. Mystic, Charles, Neponset, Weymouth, Taunton and Ten Mile; east and central Massachusetts: the Merrimack(with it's tributaries Assabet, Concord, Nashua, Shawsheen and Sudbury) and Blackstone; central and western Massachusetts: the Connecticut(with its tributaires Chicopee, Deerfield, Farmington, Miller and Westfield) and French and Quinebaug; and for western Massachusetts" Hoosic and Housatonic. The state has 1,980 miles of tidal shoreline, 190 miles east to west and 110 miles north to south, at its widest parts.
11.	Aerial Survey Photos"	Information on the availability of aerial survey photos for sections of the state may be obtained from the Geodetic Survey Div., Mass. Dept. of Public Works, 100 Nashua St., Boston, MA. 02114
12.	U.S.G.C. Topographic Maps:	The entire state covered in various combinations Maps may be obtained from Distribution Section, U.S. Geological Survey, 1200 South East St., Arlington, VA 22202 or local agents.
13.	Significant Dates:	2 Nov. 1620 - Pilgrims land at Provincetown 21 Dec. 1620 - First permanent English settlement in America at Plymouth. 2 July 1776 - Adopted statehood 6 Feb. 1788 - 6th state to ratify U.S. Constitution 15 Mar. 1820 - Last major change in state's territory, District of Maine became a state.

14.	Government	Six constitutional officers elected for 4 years: Governor, Lieutenant-Governor, Attorney-General, Treasurer and Receiver-General and Auditor. Eight Executive Councillors elected for 2 years from 8 districts to give advice to and confirm certain appointments of the Governor. General Court (Legislature) elected to 2 years composed of 40 senators and 160 members of the House of Representatives.
15.	Governmental Subdivisions:	The Commonwealth is divided into 14 counties with very little governmental significance and no legislative powers. There are 351 municipal entities, each with its own form of government and a large amount of home rule - 39 are cities and 312 are towns.
16.	Special Districts:	One of the six New England States 12 Congressional Districts

II POPULATION - U.S. CENSUS - 1980

A. During the decade of 1970 to 1980, the population of Massachusetts increased by 47,867 or 0.8%. There was an excess of births over deaths of 193,092 and an estimated out-migration of 145,225.

B-1 NUMBER OF PEOPLE

Year	Number	Percent of 1930 State	NE	US
1920	3,852,356	90.7	90.6	86.1
1930	4,249,614	100.0	100.0	100.0
1940	4,316,721	101.6	103.3	107.3
1945	4,493,281	105.7	*101.9	*108.3
1950	4,690,514	110.4	114.1	122.8
1955	4,837,645	113.8	*118.6	*134.0
1960	5,149,834	121.2	128.7	145.6
1965	5,295,281	124.6	*136.7	*157.3
1970	5,689,170	133.9	145.1	164.9
1975	5,789,478	136.2	*149.4	*173.0
1980	5,737,037	135.0	151.2	183.8

B-2. AGE COMPOSITION

Age	Number	% of Total State	NE	US
Under 5	336,481	5.9	6.1	7.2
5-14	836,695	14.6	14.9	15.4
15-19	547,839	9.5	9.5	9.3
20-64	3,289,423	57.3	57.2	56.7
65 &over	726,599	12.7	12.3	11.3
Under 18	1,490,284	26.0	NA	28.3
21 & over	3,900,569	68.0	NA	NA
Median Age		31.2	NA	30.0

B-3 ETHNIC-RACIAL DATA

	Number	Percent of Total State	NE	US
White	5,362,836	93.5	93.8	83.1
Black	221,279	3.9	3.98	11.7
Am. Ind. Esk.,Aleut	7,743	0.1	0.2	0.6
Asian & Pacific Islander	49,5010	0.9	0.7	1.5
Other	95,678	1.7	1.5	3.0
Hisp./Sp. Origin	141,043	2.5	2.4	6.4

ANCESTRY

Of the total 1980 population, 55.2% identified with the single ancestry group (3,167,235),33.0% with the multi-ancestry group and 11.7% not specified. Of the single ancestry group the 6 leading groups were: Irish (21.0%),English (14.5%), Italian (13.6%),French (9.9%), Portugese (6.0%) and Polish (5/1%)

B.-5 OCCUPATION

Of the 4,463,473 persons 16 years old and over in the State 2,811,477 or 63.0% were in the civilian labor force, of these 44.8% were females and 55.2% were males.

B-4 EDUCATION (Persons 25 yrs. old & over)

	State	N.E.	U.S.
Median No. of School yrs. completed	NA	NA	NA
Completing less than 5 grades	NA	NA	NA
Comp. High School only	37.0%	35.9%	34.4%
Comp. College or more	20.0%	19.3%	16.3%

Group	Number Emp.	Percent of Total State	N.E.	U.S.
Exec.,Adm,Mgr.	289,059	10.8	10.7	10.4
Prof. Spec.	405,046	15.1	14.3	12.4
Tech.& Related	101,209	3.8	3.4	3.1
Sales	250,973	9.4	9.3	10.0
Adm.Sup.,Cler.	502,803	18.8	17.8	17.1
Pvt. Hshld.	10,088	0.4	0.4	0.6
Protectve.Svce.	50,100	1.9	1.6	1.5
Service (ex. Hshld. & Prot.	300,282	11.2	10.8	10.9

B-6 POLITICS, PARTY AFFILIATION, 1982

Total Registered Voters	3,048,180
Registered Democrats	45.6%
Registered Republicans	14.5%
Unenrolled Voters	39.9%

B-7 INCOMES (1979)

	Families	% of Families State	N.E.	U.S.
Incomes under $5,0000	86,368	6.0	5.8	7.3
$5,000-$9,999	162,705	11.3	11.7	13.2
$10,000=19,999	403,466	28.1	29.7	29.8
$20,000-34,999	525,597	36.6	35.8	33.5
$35,000-49,999	172,950	12.0	11.3	10.6
$50,000 & over	84,402	5.9	5.7	5.6
Median Fam. Inc.		$21,329	NA	$19,908
Per.Cap.Income (non-inst'l)		7,461	NA	7,371

Group	# Emp	Percent of Total State	N.E.	U.S.
Farming, Forestry, Fishing	21,719	0.8	1.3	2.8
Precision Prod. Craft & Rpr.	300,143	11.2	12.3	12.8
Mach. Oper. Assem. Insp.	266,756	10.0	11.1	9.3
Transp. & Mat. Moving	85,861	3.2	3.4	4.5
Handlers, Clnrs. Hlprs., Labrers.	92,128	3.4	3.5	4.5

* Estimates from P-25 Report, U.S. Dept. of Commerce.

A. The 1980 U.S. Census reported that the state had 2,208,146 housing units, of which 71,276 (3.2%) were vacant seasonal and migratory and 2,136,870 (96.8%) were year-round housing units. Of the year-round units, 1,169,819 (54/7%) were owner occupied, 862,898 (40.4%)were rented and 104,153 (4.9%) were vacant.

B-1 TYPE OF STRUCTURE

	No.Units	% of Total State	NE	US
1 Unit	1,119,097	52.4	57.1	66.2
2 Units	293,184	13.7	12.0	6.1
3&4 Un.	282,249	13.2	11.6	5.1
5 or more units	425,159	19.9	17.2	17.5
Mobile Home or Trailer	17,181	0.8	2.0	5.0

B-2 NEW CONSTRUCTION

Year	Housing Units
1979	21,400
1980	16,500
1981	16,794

B-3 AGE

Year Built	No.Units	% of Units State	NE	US
1979-3/80	28,796	1.3	1.9	3.4
1975-1978	96,518	4.5	6.0	9.7
1970-1974	188,552	8.8	9.9	12.8
1960-1969	299,986	14.0	15.0	19.4
1950-1959	308,234	19.9	17.2	17.5
1940-1949	217,833	10.2	10.1	11.3
1939 or earlier	997,061	46.7	42.6	26.1

B-4 PERSONS PER UNIT

Persons	Units	% of Persons State	NE	US
1 Person	495,677	24.4	NA	NA
2 Persons	616,423	30.3	NA	NA
3 Persons	339,763	16.7	NA	NA
4 Persons	303,038	14.9	NA	NA
5 Persons	161,132	7.9	NA	NA
6 Persons or more	116,684	5.7	NA	NA
Median Persons per unit		2.3	NA	NA

B-5 VALUE OF ONE-DWELLING UNIT STRUCTURES

	No.Units	% of Units State	NE	US
Under 20K	37,739	4.1	NA	NA
20K-49,99	449,868	48.3	NA	NA
50K-99,999	371,174	40.1	NA	NA
$100K - $199,999	56,782	40.3	NA	NA
$200K or more	5,738	0.6	NA	NA
Median Value	$48,500	NA	NA	

B-6 GROSS RENTS

	Units	% of Units State	NE	US
Under $100	66,997	7.9	7.4	6.1
$100-$149	62,632	7.4	7.3	9.3
$150-$199	119,733	14.1	14.4	15.3
$200-$499	547,000	64.4	63.9	60.8
$150 & over	28,694	3.4	3.2	3.7
No cash rent	24,690	2.9	3.8	4.7
Median Rent	$254	NA	$243	

*From building permits issued

A. HISTORIC TRENDS

From the beginnings in the first permanent English settlement at Plymouth, industry developed and expanded rapidly. At first it was small-scaled farming to raise the basic necessities to sustain life, then Yankee ingenuity showed itself in the variety of products the farmers produced in their homes to supply their own and their neighbors needs.

Necessity being the spark to kindle invention-shipyards sprang up to build ships to transport produce and travelers first to coastal and then international markets. Water transportation being necessary locally because roads had not been built, in that, the wherewithal to build them was not available and even if built, the Indians were still resisting the encroachment of the settlers. Shipyards brought other industries into existence-ropewalks,canvas makers,sailmakers,fabricators of metals lumbering,etc.

The lifting of England's oppressive hand did not bring into being a land of "milk and honey", but rather a series of inter-regional squabbles resulting in a period of economic depression. The adoption of the federal constitution and Washington's guidance brought stability to the economy. Massachusetts expanded her maritime interests by trade with the orient and took over much of the world trade formerly handled by England and France.

Printing and publishing, one of the State's largest industries, got its start in Cambridge (1640) with the printing of the Bay Psalm Book. Benjamin Franklin and his father had the first commercial soap works in America.

The Embargo Act, calculated to punish England and France for the interference with our ships, caused much economic suffering, but that was worsened by Mr. Madison's War of 1812. The inability to import goods forced the new country to enter the manufacturing field and Massachusetts, because of the climate, topography and skilled labor, became a leader in textiles, leather products, apparel and machinery.

Francis Cabot Lowell set up and perfected his steam power loom in Waltham in 1814 which aided Fall River, Lawrence, Lowell and New Bedford to become great cotton textile manufacturing centers. Other beginnings leading to industrialization during this period were: first American railroad in Quincy(1826),William Beecher made the first eyeglasses in America (1833) in Southbridge, Charles Goodyear first vulcanized rubber(1839) in Woburn, Ebenezer Buttrick invented standardized clothes patterns(1863) in Sterling.

War between the States(1861-1865) established the Commonwealth as leader in the country's industrial economy, a position which continued with the added desirable asset of industrial diversification, due in large measure to the adapatability of, its labor force. Developments in this era included demonstration of the first telephone by Alexander Graham Bell(1876) in Boston, William Stanley demonstrated the first transformer(1886) in Great Barrington and Charles and Frank Duryea perfected the first successful gasoline powered automobile(1892) in Springfield.

Massachusetts factories produced more than one-third of the countries woolen goods. Leather and leather products became a very important segment of the State's economy and by 1900 the factories of Boston, Brockton, Haverhill, Lynn, Marlborough, Worcester and other Massachusetts municipalities were turning out about half of the United States' footwear(leather)production.

The following developments were significant in projecting the nation, if not the world, into the computer-space age (1926) the first liquid-propelled rocket fired by Prof. Robert H. Goddard in Auburn,(1928)the first computer, non-electrical differential analyzer developed by Dr. Vannevar Bush of M.I.T. in Cambridge and (1944) first automatic digital computer, developed by Howard Aiken of Harvard University in Cambridge.

Industry expanded to meet the demands of World War I and continued to expand until the economic crisis of 1929. Loss of some industries to locations nearer sources of raw materials and cheaper labor held back economic recovery until the advent of World War II when this State's three major assets-skilled labor, research facilities and nearness to major markets-again raised the economy to its greatest heights. The Korean and Vietnamese conflicts continued the Commonwealth's industrial success, broadening its scope into the fields of atomic power, aero-space, oceanography and electronics.

During the latter part of the seventies, the leadership trend of Massachusetts in more sophisticated and efficient manufacturing methods became apparent in the evolution of segments of the manufacturing industry known as high technology; once again demonstrating the Commonwealth's proficiency in adapting new techniqies developed by research.

B. PRESENT ECONOMY

1. General

The economy of the Commonwealth is dependent upon the economic well being of the Massachusetts portions of the 10 standard metropolitan statistical areas which had 83% of the 1980 state population and 87% of the 1981 employment covered by employment security. The 10 SMSAs, which are also the leading centers of labor, manuufacturing, population and trade, consist of Boston, Brockton, Fall River, Fitchburg-Leominster, Lawrence-Haverhill, Lowell, New Bedford, Pittsfield, Springfield-Chicopee-Holyoke and Worcester. All the SMSAs except the Pittsfield SMSA are part of a megopolis composed of 47 SMSAs from the Manchester, NH SMSA to the Washington DC-MD-VA SMSA (see Appendices A and C).

In 1981, 125,446 units reported to the Massachusetts Division of Employment Security that they had an annual payroll of $39,323,919,807 and an average of 2,609,475 persons employed. The following table gives comparable statistics for Massachusetts portions of the State's 10 SMSAs:

SMSAs	No. of Units*	1981 Annual Payroll	Avg 1981 Employees
Boston	62,810	23,589,022,893	1,456,689
Brockton	2,731	749,310,702	56,248
Fall River**	2,644	594,889,210	51,684
Fitchburg-Leominster	1,985	554,146,538	38,960
Lawrence-Haverhill**	4,168	1,451,732,214	99,324
Lowell**	3,392	1,093,515,824	76,642
New Bedford	3,520	809,665,538	65,311
Piitsfield	10,212	2,934,274,823	214,639
Springfield-Chicopee-Holyoke**	9,927	2,274,124,133	181,742
Worcester	7,513	2,283,669,839	161,926
Total for SMSAs	101,007	34,657,984,778	2,261,146

* Private Non-Profit and Profit and Government

The Gross State Product (in current dollars) as reported by the Federal Reserve Bank of Boston, 1970-1980 (1)—

GSP- "the market value of goods and services produced by a state's economy after the deduction of intermediate products used by production."

(In Millions of Dollars)

1970	31,630	1973	35,205
1971	32,028	1974	34,407
1972	33,644	1975	33,073
1976	33,794		
1977	34,988		
1978	36,052		
1979	37,435		
1980	37,945		

(1) See Appendix for industry breakdown of GSP

2. Manufacturing

In 1981, 10,581 manufacturing establishments reported to the Mass. Division of Employment Security that they had an annual payroll of $39,323,919,807 and an average employment of 2,609,475 persons. The 7 largest manufacturing groups in order of importance as employers were machinery(except electrical), electric and electronic equipment, instruments and related products, fabricated metal products, printing and publishing, apparel and finished goods, and transportation equipment.

The 3 largest manfuacturing groups, in order of importance as employers in the 10 industrial centers (SMSAs) of the Commonwealth were:

Boston -	electric and electronic equpment, instruments and related products, and machinery (except electrical)
Brockton -	leather and leather goods, apparel and finished goods, and electrical and electronic equipment
Fall River -	apparel and finished goods, textile mill products, and electric and electronic equipment
Fitchburg-Leominster -	machinery (except electrical), plastic products, and paper and allied products
Lawrence-Haverhill	electric and electronic equipment, transportation equipment, and leather and leather products
Lowell -	machinery (except electrical), transportation equipment and textile mill

B. PRESENT ECONOMY (Cont'd)

2. Manufacturing(Cont'd)

New Bedford -	apparel and finished goods, electric and electronic equipment, and textile mill products
Pittsfield -	electric and electronic equipment, paper and allied products, and machinery (except electrical)
Springfield-Chicopee Holyoke -	machinery (except electrical), fabricated metal products and paper and allied products
Worcester -	fabricated metal products, machinery (except electrical) and stone products

The location of manufacturing groups (by 2-digit SIC codes) i.e. with 490 or more employees in any one industry grouping, may be found in Appendix F.

3. Trade

In 1981, 11,104 wholesale units reported to the Mass. Division of Employment Security that they had an annual payroll of $2,572,018,069 and an average employment of 132,428 persons, while 32,641 retail units had an annual payroll of $3,759,490,752 and an average of 450,023 persons employed.

The 1977 U.S. Census of Business reported the following retail trade data (based on the 1972 Standard Industrial Classification) for the State:

	STATE
Establishments	46,665
Sales	$18,444,560,000
Per Capital Sales	3,186
Paid Employees in workweek including March 12	372,097

Classification of Business	Estab.	Sales (Add 000)	% of Total
Building Material,Hardware,Farm Equip. Dealers	1,819	737,125	4.0
General Merchandise Group	1,298	2,367,084	12.8
Food Store	5,714	4,183,277	22.7
Automotive Dealers	2,828	2,894,098	15.7
Gasoline Service Stations	3,876	1,277,296	6.9
Apparel, Accessories Stores	3,338	2,068,980	
Furniture,Home Furnishings,Equip.Stores	3,244	734,253	4.0
Eating & Drinking Places	9,917	1,820,829	9.9
Drug Stores,Proprietary Stores	1,678	571,573	3.1
Misc.Retail Stores	12,953	2,790,045	15.1

B. PRESENT ECONOMY (Cont'd)

4.Classification of Worker

The 1980 Census of Population, which reported information on the basis of residence rather than place of employment showed that there were 2,093,264 private wage and salary workers, 442,964 government workers, 131,106 self-employed and 6,941 unpaid family workers living in the Commonwealth.

5. Agriculture

It is interesting to note that in this age of high technology that the 1978 Census of Agriculture shows that between the Censuses of 1974 and 1978 the number of farms increased from 4,497 to 5,905 and the land acreage in farms increased from 601,734 to 680,513.

See appendix D for additional data on agriculture.

V EMPLOYMENT AND PAYROLLS - 1980

As Reported to the Division of Employment Security

A. All Industry

SIC CODE	Industry	No. of Units	Annual Payroll	EMPLOYMENT Average	EMPLOYMENT Dist.	EMPLOYMENT Rank
01-07	Agriculture & Services	1,635	120,115,313	110,997	0.4%	13
08	Forestry	12	463,956	47	-.-	16
09	Fisheries	496	65,791,676	3,602	0.1	14
10-14	Mining	87	20,446,096	1,015	-.-	16
15-17	Construction	12,160	1,473,047,061	79,285	3.0	6
20-39	Manufacturing	10,581	12,078,937,375	668,984	35.6	1
41-37	Transportation	3,902	1,105,591,204	59,817	2.3	9
48	Communication	411	929,956,560	38,163	1.5	15
49	Utilities	268	452,709,741	18,568	0.7	12
50-51	Wholesale Trade	11,104	2,572,018,069	132,428	5.1	5
52-59	Retail Trade	32,641	3,759,490,752	450,023	17.2	3
60-62	Finance	2,052	1,149,719,846	69,771	2.7	7
63-64	Insurance	2,505	1,128,647,654	65,294	2.5	8
65-67	Real Estate	3,988	355,918,016	24,505	0.9	11
70-89	Services	39,558	8,198,602,257	617,988	23.7	2
91-97	Govt.(Local/State/Fed)	4,046	6,002,464,231	369,008	-.-	-
	Total	125,446	39,323,919,807	2,609,475	-.-	--

B. Manufacturing

SIC CODE	Group	No. of Units	Annual Payroll	1980 EMPLOYMENT Average	EMPLOYMENT Dist.	EMPLOYMENT Rank
20	Food & Kindred Products	517	417,135,768	25,540	3.8%	10
21	Tobacco Manufacturers	1	Firm included in Misc. Mfg. Ind.			
22	Textile Mills Products	272	350,187,6051	23,582	3.5	11
23	Apparel & Finished Goods	700	414,419,203	39,635	5.9	6
24	Lumber & Wood Products	425	67,623,182	5,271	0.6	17
25	Furniture & Fixtures	317	111,851,410	7,731	1.2	16
26	Paper & Allied Products	293	507,186,569	27,706	4.1	9
27	Printing & Publishing	1,525	721,367,144	44,483	6.6	5
28	Chemicals & Allied Prod.	335	405,504,669	18,341	2.7	13
29	Petroleum & Coal Prod.	46	42,314,283	1,832	0.3	18
30	Plastic & Rubber Prod.	494	449,862,867	29,739	4.4	8
31	Leather & Leather Prod.	303	256,149,483	20,907	3.1	12
32	Stone,Clay & Glass Prod.	298	245,369,201	12,854	1.9	15
33	Primary Metal Industries	275	318,123,840	17,262	2.6	14
34	Fabricated Metal Prod.	1,124	949,698	51,494	7.7	4
35	Machinery, except Elec.	1,740	2,246,725,464	111,460	16.7	1
36	Electric&Electr. Equip.	719	2,145,891,624	111,407	16.7	2
37	Transportation Equip.	166	781,263,254	33,257	5.0	7
38	Instruments & Related Pr.	---	----------	--------	-.-	--
39	Misc. Manufacturing Ind.	548	12,078,937,375	25,671	3.8	--

NOTE: Units - Number of operations of different industrial activity within a municipality, regardless of corporate affilitation.

A-1 GENERAL

Totals of full market value of all taxable property, tax levy and net debt for the 351 muunicipalities are expressed in Sections A-2,A-3 and A-4. The cost of municipal government(including schools is raised by each municipality principally through the levies on real property.

A-2 ASSESSED VALUATION OF ALL TAXABLE PROPERTY AT FULL MARKET VALUE, Jan 1*

Year	Amount
1970	31,016,200,000
1972	35,051,300,000
1974	54,728,100,000
1976	63,103,898,000
1978	68,604,908,000
1980	88,288,293,000
1982	125,678,557,000

*These are totals of the amounts set for each municipality by the State Tax Commission every 2 years.

A-3 TOTAL TAX LEVY OF THE 351 MUNICIPALITIES

Year	Amount
Calendar Year 1972	2,051,183,755
Calendar Year 1973	2,169,494,886
Fiscal Year 1975	2,322,428,470
Fiscal Year 1976	2,460,888,661
Fiscal Year 1977	2,785,875,567
Fiscal Year 1978	2,967,933,295
Fiscal Year 1979	3,030,567,100
Fiscal Year 1980	3,001,158,061
Fiscal Year 1981	3,346,687,235
Fiscal Year 1982	3,035,589,705*

* Gosnold estimated to be $50,000

A-4 TOTAL NET DEBT OUTSTANDING-351 MUNICIPALITIES

As of Date	Amount
1 Jan. 1970	1,255,984,852
1 Jan. 1972	1,653,278,738
1 Jan. 1973	Not available
30 June 1975	2,087,194,363
30 June 1976	2,190,431,084
27 Dec. 1977	2,231,932,468
30 June 1978	2,224,739,208
30 June 1979	2,171,005,395
30 June 1980	2,126,665,449
30 June 1981	1,994,821,565

A-5 State

A brief outline of the finances—expenditures and revenues of the Commonwealth for the fiscal year 1982 may be seen below in the 1981 Abstract of the Financial Report of the Comptroller:—

Chart A

How the STATE REVENUE was Obtained
Fiscal Year ending
June 30, 1981
$7,514,325

Bond Sales	4.1
Departmental Revenue and other	10.0
Income Tax	30.9
Corporations, Banks & Ins. Co.'s	9.6
Fed. Reimbursements Grants & Reviews sharing	24.2
Sales & Use Tax	12.2
Other Taxes	5.4
Motor Fuels Tax	3.6
State Revenue	61.7%

Chart B

DIRECT EXPENDITURES STATE FUNDS
Fisical Year ending
June 30, 1981
$7,640,440,330

State Aid	29.4
Other State expenditures	19.2
Pensions	2.4
Pub. Welfare	25.8
Interest	2.4
Debt Retrmnt.	2.6
Health & Hospitals	8.7
Correction & Protection	2.9
Education	6.6
State Oper.	70.6%

COMPARATIVE STATEMENT OF REVENUES
1981 and 1980 (000's ommitted)

	1982	1981
Taxes:		
Income	12,324,052	12,057,945
Sales & Use	917,362	859,716
Corporations Banks & Ins.Co.	720,500	650,152
Motor Fuel	369,297	237,528
Other	406,255	388,641
Total Taxes	4,637,466	4,193,982
Fed. Reimbursements, Grants & Revenue sharing	1,817,623	1,892,777
Departmental Rev. & Other	751,781	670,816
Bond Sales	307,455	257,800
Total State Revenues	$7,514,325	$7,015,475

COMPARATIVE STATEMENT OF EXPENDITURES
1981 and 1980 (000's ommitted)

	1982	1981
State Aid	$2,246,397	$2,016,277
Public Welfare	1,974,042	1,906,576
Health & Hospitals	665,504	635,430
Education	505,358	501,161
Correction & Protection	223,583	245,322
Debt. Retirement	197,792	275,406
Pensions	186,911	173,105
Int. on Debt	180,003	162,707
Other State Expenditures	$7,640,440	$7,253,316
Total State Expenditures	$7,253,318	$6,786,663

A-6 Taxes

BUSINESS OR MANUFACTURING CORPORATIONS

Incomes measures.....9.5%
Property Measure(reduced from $7.98 per $1,000 since 1972).....$2.60 per $1000
Minimum Tax.....$228.00

Commercial Banks, Banking Associations. Trust Companies-12.54%(net income)

Savings, Cooperative Banks and Savings and Loan Associations - 1.254% of net operating income and 0.125% of average deposits.

Life Insurance Companies and Insurance Departments of Savings Banks - 2.0% on taxable premiums, and if domestic - 30% on Mass. taxable investment income. Casualty Companies - 2.28% on Mass. taxable premiums, and if domestic - 1% on gross investment income.

Fire & Marine Insurance Companies 5.7%(on underwriting profits)

Real Estate Transfer - $1.14 for 1st $100 to $500 of selling price(less mortgage assigned) - $1.14 for each additional $500 or fraction thereof.

PERSONAL INCOME

The State income tax law is based on two classes of income - earned and unearned:
Earned Income is taxed at 5% plus 7.5% surcharge
Unearned Income (interest, except from Massachusetts savings accounts, dividends and net capital gains including gains from tangible property with long-term deductions starting at 20% for 1980, 40% for 1981 and 60% thereafter) is taxed at 10% plus 7.5% surcharge.

Deductions:
Social Security payments, employee business expense, child care and alimony.
Rental deduction - (1/2 rental payment not to exceed $2,500)

Exemptions:

1. No tax if single income is not more than $3,000; or if husband and wife joint return is not more than $5,000.
2. Single Person-$2,200.
3. Husband and wife filing jointly-$2,000 plus amount of earned income not exceeding $2,000 of spouse with smaller income, plus $800 if earned income of such spouse is not more than $2,0000. Married persons filing separately - $1,000 each
4. $100 for single person and $200 for husband and wife filing jointly against savings account interest from institutions within the Commonwealth, which is taxed at the 5% rate.
5. $700 for each dependent.
6. $700 additional for taxpayers and spouses age 65 or over.
7. Medical and dental expenses as claimed on U.S.

A-6 Taxes (Cont'd)

SALES AND USE TAX

5% on gross receipts of sales(including rental) or the storage, use of consumption of tangible personal property.

Exemptions:

Machinery, replacement parts thereof, materials, tools and fuel used directly and exclusively engaged in foreign and interstate commerce; fuel for heating purposes; motion picture films for commercial exhibition; property ordinarily sold by funeral directors; motor vehicles purchased by and specially equipped for paraplegics; casual and isolated sales under given conditions, etc.

MISCELLANEOUS

Room Occupancy-5.7% of total amount of rent for each occupancy.

Alcoholic Beverages and Alcoholic Excise-Malt Beverages $2.30 per barrel(31 gals.) Cider $.03 per wine gallon. Still wine(including Vermouth) $.55 per wine gallon. Sparkling Wines and Champagne $.70 per wine gallon. All alcoholic beverages containing 15% or less alcohol $1.10 per wine gallon; beverages containing between 15% and 50% of alcohol $4.05 per wine gallon; beverages containing more than 50% of alcohol $4.05 per proof gallon.

Cigarettes - 21 cents per package of 20

Gasoline - 10% of wholesale selling price

Employment Security Contributions - 8 schedules with rates ranging from 1.5 to 5.4 (present schedule is 2.5%-5.4% on first $6,000 wages of covered worker, plus 1% Solvency Tax).

Public Utilities-6/5% (net income and allocated net income of interstate companies).

Local Property Taxes-Fair cash value of real and personal property. Rates fixed annually by the local board of assessors and must be approved by the State Tax Commission. Tax administrated and collected at local level.

All non-corporate businesses are taxed on personal property.

Motor Vehicle Excise-$25 per $1,000 of valuation.

Motor Vehicle Registration Fees

Private Passenger Cars - $20 biennially

Trucks - diesel & gasoline - $7 per 1,000 lbs.
minimum $20 annually

Motor Vehicles (cont.)

Tractors-Part of semi-trailer units
diesel & gasoline - $7 per 1,000 lbs.
minimum $48 annually

Not part of semi-trailer unit
diesel & gasoline - $7 per 1,000 lbs.
minimum $24 annually

Trailers - heavy duty-$6 per 1,000 lbs. minimum $60 annually

Trailers - semi-$30 flat fee annually

Buses - Check with Registry of Motor Vehicles, giving all particulars, size, usage, etc.

Pari Mutual Tax - From 3% to 11% of amount wagered per day depending upon type of racing, plus 1/2 breakage at dog tracks and fairs.

Estate Tax - On the taxable estate, after expenses, claims, a $30,000 exemption and a marital deduction-5% to 16%. Estates under $60,000 are not taxed.

The first free public school in America, supported by direct taxation, was the Latin School established in 1639 by the town of Dorchester(now a geographical section of Boston). The Boston Public Latin School,founded in 1635, was the first public (in that it was operated by Boston) school in America.

The Board of Regents of Higher Education has given authority to the following number of institutions to grant degrees.

33 - Baccalaureate and above 1981 enrollment of 332,492

15 Public	109,559
63 Private	222,933

36 - Associate level degrees with 1981 enrollment of 93,976

18 Public	74,036
18 Private	19,940

119 - Total Institutions with 1981 enrollment of..... 426,469

The State Board of Education has approved for future implementation a policy on basic skill improvement to upgrade the quality of education in the public schools of the Commonwealth.

The integrated cost per pupil in net average membership 1980-81 $2,436

Pupil Enrollment Grades K through 12 1 Jan. 1981

Public	991,325
Private	128,904
Total	1,120,729

Distribution of High School Graduates - Classes of 1981

Number of Graduates 74,529

38% went on to a 4-year college
15% went on to a 2-year college
31% went on to work
5% to other educational facilities
11% to the military of not specified

The Bay State Skills Corporation, a joint venture by the Commonwealth and the business community, expedites the training of technicians to take their places in the high technology fields and other areas of employment needing trained personnel.

A. GENERAL

The Commonwealth of Massachusetts has adequate facilities for handling air, land and water transportation. Thirteen established regional planning agencies, encompassing within their regions all but 8 of the 351 municipalities, have, as one of their areas of interest, the planning for adequate transportation facilities.

B. AIR

Logan International Airport in Boston is the heart of air activity in the state. This airport is the 13th busiest in the world, based on number of passengers with tickets starting or terminating at Boston. Logan is the nearest major United States' airport to its downtown business district and to Europe. In addition, the Commonwealth has 52 commercial airports,. of which 26 are publicly operated and 26 privately. There are also 3 military airfields.

C. COMMUTING

The Boston and Maine Railroad supplies commuter service in the Boston area subsidized by the Massachusetts Bay Transportation Authority, a state-created agency charged with the responsibility of supplying commuter service to 79 municipalities in eastern Massachusetts. Rail commuter services has also been extended outside the Boston area to Concord, N.H. and Providence, R.I. and in Massachusetts to Franklin, Gardner, Haverhill and Rockport. Besides rail service, the M.B.T.A. servies commuters with fleets of buses, trolley buses, subway and elevated trains and high-speed trolley cars. Rapid transit facilities have been extended to the north, being relocated to the railroad right-of-way to the south and extended on the Braintree - Cambridge line to the northwest.

Recognizing the responsibility of government to supply public services when private enterprise finds itself inadequate to the task, the 1973 session of the General Court enacted legislation providing for the creation of 10 transportation authorities to serve 20 population centers of the state, subject to acceptance by the municipalities permitted to form the 10 authorities. Provision is made in the law for the municipalities adjacent to an authorities' area to join said area. The 1973 law permitted the following named areas to be served by these authorities:Attleboro-Taunton, Brockton, Cape Cod,Fall River-New Bedford, Fitchburg-Leominster-Gardner, Lawrence-Haverhill, Lowell, Pittsfield, Springfield-Chicopee-Holyoke, and Worcester.

D. HIGHWAY

The major highways serving the Commonwealth may best be described as those routes emanating from Boston and vicinity like the spokes of a wheel, or ribs of a fan, stregnthened by 2 arcs of radials supporting the ribs or spokes. Listed counter-clockwise: I-95 northeasterly to Maine, I-93 and US-3 to New Hampshire, the cross-state routes -State 2 (to New York), US-20 (to the Pacific Ocean in Oregon), State 9 (to Pittsfield, Mass.), I-90, the Massachusetts Turnpike, (to Seattle, Washington), and the southern route I-95(to Florida), State 24 (to I-95 in Fall River) and State 3 (to Cape Cod). I-91 passes north to south through the Connecticut River Valley intersecting with I-90, State 9, US-20 and State 2 and on to connect with Canadian Route 10 to Montreal.

E. RAIL

The State is served by 4 Class 1 railroads - AMTRAK, Boston and Maine, Central Vermont(Canadian National) and Conrail. Other railroads serving Massachusetts are the Edaville, Cape Cod, and Hyannis, Fore River, Grafton and Upton, Massachusetts Central, and Providence and Worcester.

Piggy-Back service is provided within the State by the Bay Colony Railroad, the Boston and Maine Railroad at East Cambridge, and by Conrail at Boston, West Springfield, and Worcester.

F. TRUCKING

The Massachusetts Turnpike(IR90), one of the State's cross-state routes, has 5 tandem trailer lots at Interchanges #1 in West Stockbridge with State Routes 41 and 102, #6 in Chicopee with TR 291, #11 in Millbury with State Route 122, #14 in Weston with State Route 123 and #13 in Boston at the Beacon Railyard in the Allston section of the city.

G. WATER

The six major ports in Massachusetts with 1980 statistics from the U.S. Corps of Engineers are:

Ports	Total Port Tonnage	Import Tonnage
Beverly	25,211	*
Boston	22,033,922	5,192,062
Fall River	4,804,481	727,382
Gloucester	212,707	*
New Bedford-Fairhaven	228,516	*
Salem	1,556,764	683,319
Remainder of State	143,437	*

* Not published, if undedr 250,000 tons.

Boston, the largest port has one of the best natural, deep-water harbors in the world, is 200 miles nearer Africa and Europe than New York City, 1,200 miles nearer Panama and the West Coast of South America than San Francisco and nearer Rio de Janeiro and Buenos Aires than any other North Atlantic Port.

Boston is one of the leading container shipping ports in the world with equipment surpassed by none.

SHORTEST ROUTES TO IMPORTANT FOREIGN PORTS AND JUNCTION

	To FASTNET IRELAND	Boston's Advantage (miles)	To BISHOPS ROCK ENGLAND	Boston's Advantage (miles)	To PENTLAND FIRTH SCOTLAND	Bosto Advan (i
Boston	2,669		2,783		2,947	
New York	2,837	168	2,957	174	3,120	173
Philadel.	2,935	315	3,092	309	3,253	313
Baltimore	3,123	454	3,230	447	3,401	454
Norfolk	3,002	333	3,107	324	3,280	33

To BORDEAUX FRANCE	Boston's	To Advantage (miles)	To STRAITS OF GIBRALTER	Boston's	To Advantage (miles)	To AZORES	Boston's	Advantage (miles)
Boston	3,094		Boston	3,008		Boston	2,086	
New York	3,258	164	New York	3,180	172	New York	2,247	161
Philadel.	3,406	450	Philadelphia	3,466	458	Philadelphia	2,409	306
Baltimore	3,544	450	Baltimore	3,466	458	Baltimore	2,409	323
Norfolk	3,423	329	Norfolk	3,335	327	Norfolk	2,401	315

To CAPETOWN SO. AFRICA	Boston's	Advantage (miles)	To	Boston's RIO DE JANEIRO BRAZIL	Advantage (miles)
Boston	6,707		Boston	4,738	
New York	6,786	79	New York	4,762	24
Philadel.	6,861	154	Philadelphia	4,817	79
Baltimore	6,912	205	Baltimore	4,844	106
Norfolk	6,790	83	Norfolk	4,723	15
			San Francisco	7,581	2,343

(Source: U.S. Navy Hydrographic Office) Source: Table of Distances, U.S. Dept. of Commerce

H. FOREIGN TRADE ZONES

Foreign trade zones have been established at the Ports of Boston and New Bedford.

A. DEVELOPMENT INCENTIVES

1. Financial/Tax/Training

The following is a listing of measures available to make the establishment or expansi of a business more profitable in Massachusetts:

Financial Incentives

Small Business Purchasing - Reducing some of the major hindrances to small business participation in state purchasing.

Loans - For small businesses unable to obtain financial requirements from conventional sources.

Loans - Financing in conjunction with community development corporations to entrepreneurs unable to obtain funding from conventional sources.

Mortgage Insurance - On loans to industries in need of financing.

Revenue Bonds - Low cost bond financing for industrial development on the part of a company by a municipality.

Tax Incentives

Loss Carry Over - Losses for any new corporation in the first 5 years of operation may be carried forward for tax purposes.

Alternative Energy Use - Tax reductions for use of alternative energy sources.

Export Sales Exemption - Exemption from sales tax on export sales of multi-state and multi-national corporations.

Investment Credit - A 3% tax credit on cost of depreciable real and tangible property.

Urban Job Incentive - Grant of credit against state excise tax liability and reduction of real estate tax for establishing a facility in certain urban areas.

Payroll Factor - A growth incentive establishing a ceiling beyond which payrolls of multi-state corporations are not counted for taxation purposes.

Pollution Controls - Tax reductions for use of pollution controls.

Tax Incentives (cont.)

Property Tax Exemption - Exemption on tangible property (inventory, machinery and equipment) and inventory and equipment of non-manufacturers.

Sales Tax Exemption - Exemption on machinery and replacement parts and by manufacturers and corporations primarily engaged in research and development.

Targeted Jobs Tax Credit - For hiring eligible employees.

Five Year Tax Exemption - On gross income derived from the development in the state of patents useful for energy conservation or from activities related to such development.

Training Incentive

Training Subsidies - State provides training of needed employees or reimburses employer who provides on-the-job training.

2. Labor Stability

During the period 1971-80 the Commonwealth ranked 1st in labor stability among the 10 states having the largest number of non-agricultural employees. Stability is based on non-agricultural employment and days idle from labor disputes per 10,000 days available-in this way all states, large and small, are put on a fair comparative basis.

3. Geographical

The Northeast American Market(500 mile radius of the City of Worcester-see Appendices A, C and C) includes:

-an estimated population of 77,357,0648 of which 60,793,350 were in the United States(26.8% of U.S. total) and 16,564,298 were Canadian(68.0% of Canadian total)

-an area compromising 11 states, District of Columbia and parts of 4 states in the U.S.; and in Canada 1 province and parts of 3 others.

-75 entire Standard Metropolitan Statistical Areas (centers of industry, population and trade) and partial inclusion of 4 other SMSA's in the U.S. with a total population of 50,396,232 or 22.2% of the U.S.

-13 of the 24 Canadian Metropolitan Areas with a total population of 9372,655, or 3.5% of the Canadian total.

B. LABOR SUPPLY and WAGE RATES

1. Supply

Labor supply and types of workers available may be obtained from the labor market economists of the Research Department, Massachusetts Division of Employment Security, Charle F. Hurley Building, Government Center, Boston, MA 02214 and from the area offices of the Division of Employment Security.

Statistics to assist firms participating in Affirmative Action Programs are available fr aforementioned labor market economists.

2. Wage Rates

a. Hours and Earnings of Production Workers in the State are found in the monthly "Employment Review" by the Massachusetts Division of Employment Security.

b. Bureau of Labor Statistics, U.S. Department of Labor publications-
- "Area Wage Surveys, Metropolitan Areas" (annually)
- "Industry Wage Surveys" (annually) e.g., machinery workers
- "Occupational Earnings and Wage Trends in Metropolitan Areas" (annually in 3 part series)
- "Occupational Earnings in Selected Areas" (annually in 3 part series)

C. DEVELOPMENT ASSISTANCE

Development assistance is available from many sources at the federal, state, regional an local levels. Among the most important (from which other sources can be suggested) are: Sm Business Administration of the U.S. Dept. of Commerce. local industrial Development commiss and the regional development commissions (see X PLANNING).

The Massachusetts Department of Commerce and Development provides advice and services on following:

- Available land and buildings
- Data on the wage rates, labor supply and other statistics on the work force
- Help secure investment capital for growing businesses
- Supply information on numerous tax incentives
- Answer questions relative to transportation facilities, natural resources amd environmental regulations
- Encourage foreign investment in Massachusetts and assist Massachusetts companies i exporting their goods.

D. BUSINESS ASSISTANCE PROGRAMS

State Office of Minority Business Assistance(SOMBA) - established to make other state agencies more sensitive to the needs of minority entrepreneurs. Increase estate purchase of goods and services from minority businesses, and develop programs upgrading the management skills of minority businessmen and businesswomen in Massachusetts.

Business Visitation Program - Visitation program by the Massachusetts Department of Commerce and Development personnel to manufacturers and non-manufacturers to increase the awareness among businesses of the State's concern for their economic well-being , make known the State's broad spectrum of business aids and improve relationships between industry and State agencies.

Small Business Assistance Division - Small business assistance program providing counseling and referral to appropriate local, state and federal resource groups.

Massachusetts Industrial Finance Agency - Administers the Industrial Revenue Bond and Industrial Mortgage Financing Program

Massachusetts Technology Development Corporation - Provides the technical assistance and start-up capital to small, innovative technology based businesses.

Massachusetts Capital Resource Company - Funded by domestic life insurance firms, it will invest $100 million in Massachusetts companies.

Massachusetts Community Economic Development Assistance Corporation - Provides technical assistance to community based organizations in their efforts to effect community revitalizatior and job creation.

Massachusetts Business Development Corporation - provides funds to companies unable to obtain adequate financing from conventional sources.

Massachusetts Community Development Finance Corporation - provides funds to foster community involvement in revitalizing local economies and expand employment.

Training Assistance Programs - Standard or customized training is available. The skill needs of individual firms or groups of firms are met at 77 public vocational schools, 10 CETA Skill Centers, 34 two-year colleges, dozens of commercial trade schools, and at the 88 colleges and universities. High Technology firms within Massachusetts have established in-deepth relationships with CETA programs as well as with Harvard and M.I.T. Massachusetts can be thought of as a giant educational campus. In a special effort to increase training for the huge demand in high technology skills, the Massachusetts legislature appropriated $3,000,000 of state funds in 1981. Administered through the Massachusetts Bay State Skill Corporation (BSSC) cash grants are provided to education or training institutions. The state funds must be matched ahead of time by non-state resources from private industry. Although high technology related skills are favored, virtually any skill is appropriate. (Please, also see preceeding Section VII which discusses Educational Resources.)

The Commonwealth has been divided into 13 regional planning districts encompassing 343 municipalities. The districts form such distinct economically and socially integrated areas that they are quite suitable for logical planning regions and could quite reasonably form the basis for dividing the state into other types of economic, political or social districts - such as counties (if, indeed, we need counties), regional governments, sales territories, etc. The Regional planning districts were set up to plan for the economic and social growth of their respective regions and to aid their member municipalities in their local planning efforts.

329 municipalities, containing about 99% of the State's population, have planning boards.

212 municipalities have prepared master plans with the use of federal funds - othe municipalities have accomplished master plans with local funds.

304 municipalities containing about 98% of the State's population, regulate zoning

Regional Planning Commissions in Massachusetts

Berkshire Regional Planning Commission, 10 Fenn St., Pittsfield, 01201
Cape Cod Planning & Economic Development Commission, First District Court House, Barnstable 02630.
Central Massachusetts Regional Planning Commission, 71 Elm St., Worcester 01609
Franklin County Department of Planning, Court House, Greenfield, 01301
Lower Pioneer Valley Planning Commission, 26 Central St., West Springfield 01089
Martha's Vineyard Commission, Box 1447, Oak Bluffs, 02557
Merrimack Valley Planning Commission, 5 Washington St., Haverhill, 01830
Metropolitan Area Planning Council, 110 Tremont St., Boston 02108
Montachusett Regional Planning Commission, 150 Main St., Fitchburg 01420
Nantucket Planning & Economic Development Commission, Broad St., Nantucket 02554
Northern Middlesex Area Commission, 144 Merrimack St., Lowell 01852.
Old Colony Planning Council, 232 Main St., Brockton 02401.
Southeastern Regional Planning & Economic Development District, Town Hall Annex, Marion 02738

XI UTILITIES

ELECTRIC SERVICE

Electric power is available to all municipalities in Massachusetts.

To insure better service, New England was one of the first areas in the country to have erchange of power between companies. Presently, the generating units of northeastern United ites and Canada have united in the Northeastern Power Coordinating Council, a mutual sistance agency to exchange electric power to prevent "brown-outs" and "black-outs". This stem is computer controlled to asssure reliability of power sources.

To increase efficiency and capacity, as well as to offset increased inflationary costs of ver, the Commonwealth now has two nuclear generating plants(at Plymouth in the east and Rowe the west) and 2 massive pumped hydro plants.

GAS SERVICE

Natural gas is available in all the major industrial and population centers. The various vate companies or municipal departments supplying gas to individual customers are serviced either Algonquin Gas Transmission System or the Tennessee Gas Transmission System.

WATER SERVICE

The following are chemical analyses of samples taken from different surface sources in the monwealth by the Dept. of Environmental Quality Engineering, 1981.

MILLIGRAMS PER LITER

	Boston Tap in City Hall*	Worcester Tap in City Hall	Springfield Tap in City Hall	New Bedford Tap in City Hall	Lowell Tap in City Hall	Pittsfield Tap in City Hall
bidity	0.4	0.99	0.6	0.4	0.0	0.7
lor	13.0	NA	15.0	0.0	0.0	13.0
	7.6	6.0	6.2	7.0	6.3	6.2
kalinity	10.0	5.0	5.0	13.0	7.0	8.0
dness	12.0	15.0	12.0	20.0	16.0	20.0
lcium	3.5	NA	2.9	6.0	4.9	6.0
gnesium	0.7	NA	1.1	1.3	0.9	1.7
dium	7.8	NA	5.0	12.0	16.0	2.3
tassium	0.8	NA	0.6	0.7	0.8	0.8
on	0.05	0.13	0.08	0.14	0.00	0.09
nganese	0.00	NA	0.01	0.00	0.02	0.00
lica	2.00	NA	2.0	1.2	4.0	2.9
lfate	21.0	NA	5.0	20.0	28.0	5.0
loride	7.0	15.0	10.0	13.0	17.0	5.0
monia-N	0.16	NA	0.01	0.00	0.21	0.00
trate-N	0.1	NA	0.1	0.0	0.10	0.3
pper	0.01	NA	0.12	0.00	0.3	0.14
ec. Cond.	64.0	65.0	54.0	115.0	115.0	68.0

ource of supply is Water District, Metropolitan District Commission-supplying 32 nicipalities(in whole or in part) in the Boston area and 9 municipalities outside the M.D.C. ea.

GROSS STATE PRODUCT

GROSS PRODUCT BY INDUSTRY

CONSTANT 1972 DOLLARS

($ Millions)

	1970	1978	1979	1980
Total Gross State Product	31,630	35,052	37,435	37,945
Agricultural Services Forestry, Fisheries	98	116	129	123
Mining	31	17	17	17
Construction	1,652	976	978	943
Manufacturing Total	8,077	10,103	10,525	10,551
Durable:	4,902	6,609	6,990	7,146
Lumber and Wood	73	72	75	71
Furniture and Fixtures	84	100	100	98
Primary Metals	239	233	127	227
Fabricated Metals	572	751	774	760
Machinery, except electrical	1,102	1,494	1,637	1,798
Electrical Machinery	1,116	1,708	1,866	2,007
Motor Vehicles	98	191	172	154
Transportation Equip, except Mot. Veh.	282	459	461	438
Ordnance	329	---	---	---
Stone,Clay & Glass Prod.	188	215	225	215
Instruments	498	1,046	1,050	1,022
Miscellaneous Manufacturing	272	340	344	347
Nondurable:	3,175	3,494	3,535	3,405
Food and Kindred Products	526	475	494	514
Textiles	321	370	362	343
Apparel	294	389	392	395
Paper	451	519	515	470
Printing and Publishing	530	567	566	579
Chemicals	337	438	462	436
Petroleum	25	55	77	49
Tobacco	6	*	*	*
Rubber & Miscellaneous Plastics	422	458	444	415
Leather	263	223	224	204
Trade	5,435	6,160	6,383	6,297
Wholesale Trade	2,237	2,484	2,622	2,643
Retail Trade	3,248	3,676	3,767	3,654
Finance, Insurance & Real Estate	5,407	6,078	6,374	6,802

Gross State Product (cont.)

	1970	1978	1979	1980
Finance (cont.)				
Banking	741	749	779	820
Other	4,666	5,329	5,595	5,981
Transportation	908	1,012	1,045	995
Communications & Public Utilties	1,608	2,201	2,285	2,460
Communications	834	1,386	1,477	1,626
Public Utilties	774	816	807	834
Services	4,910	5,633	5,934	6,012
Business and Repair Services	1,086	1,265	1,374	1,480
Professional, Social & Related Services	3,147	3,725	3,902	3,901
Other Services	676	644	659	631
Government	3,331	3,645	3,664	3,651
Federal Civilian	788	717	695	684
Federal Military	308	154	155	151
State and Local	2,235	2,774	2,813	2,816
Farm	123	109	96	95
TOTAL PER CAPITA (dollars)	5,545	6,278	6,515	6,598

Appendix A

METROPOLITAN AREAS AND STANDARD METROPOLITAN STATISTICAL AREAS WITHIN THE NORTHEAST AMERICAN MARKET

Total Inclusion
Canadian Metropolitan Areas

Chicoutimi-Jonquiere (Que.)
Halifax (Nova Scotia)
Hamilton (Ont.)
Kitchner (Ont.)
London (Ont.)
Montreal (Ont.)
Oshawa (Ont.)
Ottawa-Hull (Ont.-Que.)
Quebec (Que.)
St. Catherines-Niagara (Ont.)
St. Joh n (New Brunswick)
Toronto (Ont.)
Trois-Rivieres (Que.)

U.S. Standard Metropolitan Statistical Areas

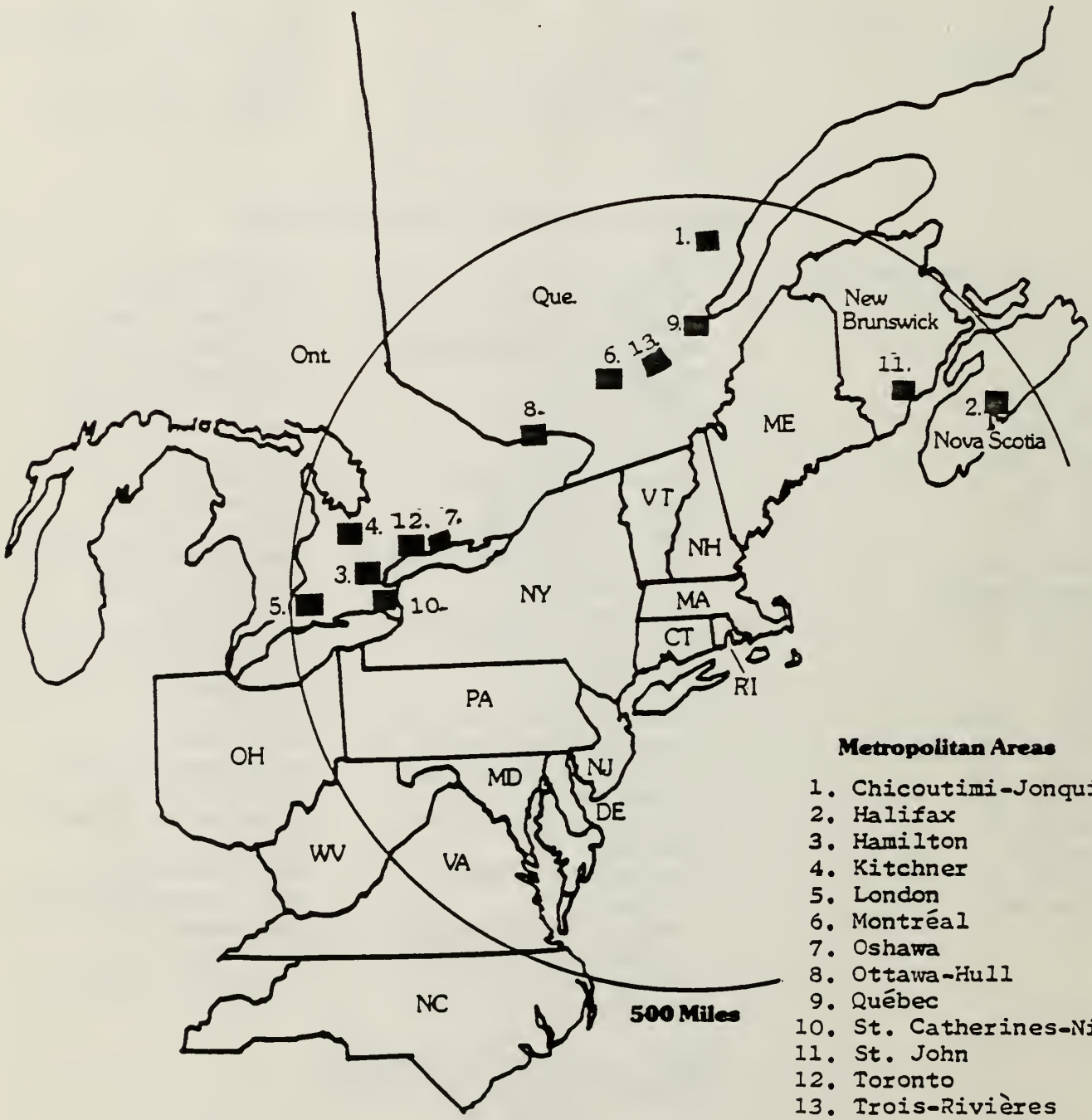
Albany-Schenectady-Troy, N.Y.
*Allentown-Bethlehem-Easton PA-NY
Atlantic City, N.J.
*Baltimore, MD
Bangor, ME
*Binghampton, NY-PA
*Boston, MMA
*Bridgeport, CT
*Bristol, CT
*Brockton, MA
Buffalo, NY
Burlington, VT
Charlotteville, VA
Cumberland, MD-WV
*Danbury, CT
*Elmira, NY
Erie, PA
*Fall River, MA-RI
*Fitchburg-Leominster, MA
Glens Falls, NY
Hagerstown, MD
*Harrisburg, PA
*Hartford, CT
*Jersey City, NJ
Johnstown, PA
*Lancaster, PA.
*Lawrence-Haverhill, MA-NH
Lewiston-Auburn, ME
*Long Branch-Asbury Park,N.J.
*Lowell, MA
*Manchester, NH
*Meriden,CT
*Nashua, NH
*Nassau-Suffolk, NY
*New Bedford, MA
*New Britain, CT
*New Brunswick-Perth Amboy-Sayreville, NJ
*New Haven-West Haven CT
*New London-Norwich, CT
*New York, NY-NJ
*Newark, Nj
*Newburg-Middleton, NY
Newport News-Hampton, VA
Norfolk-Virginia Beach-Portsmouth, VA-NC
*Northeast Pennsylvania
*Norwalk, Ct
*Patterson-Clifton-Passaic, NJ
Petersburg-Colonial Heights-Hopewell, VA
*Philadelphia, PA
*Pittsburgh, PA
Pittsfield, MA.
Portland, ME
Portsmouth-Dover-Rochester, NH-ME
*Poughkeepsie, NY
*Providence-Warwick-Pawtucket,RI-MA
*Reading,PA
Richmond, VA
Rochester, NY
Sharon, PA
*Springfield-Chicopee-Holyoke, MA-CT
*Stamford, CT
State College,PA
Steubenville-Weirton,OH-WV
Syracuse, NY
*Trenton, NJ
Utica-Rome, NY
*Vineland-Millville-Bridgeton, NJ
*Washington, DC-MD-VA
*Waterbury, Ct
Williamsport, PA
*Wilmington, DE-NJ-MD
*Worcester,MA
*York, PA
Youngstown-Warren OH

*Part of Eastern U.S. Megapolis

Partial Inclusion of 4 SMSA's
Akron, OH
Canton, OH
Cleveland,OH
Wheeling, WV-OH

NORTHEAST AMERICAN MARKET

CANADIAN METROPOLITAN AREAS



Metropolitan Areas

1. Chicoutimi-Jonquière
2. Halifax
3. Hamilton
4. Kitchner
5. London
6. Montréal
7. Oshawa
8. Ottawa-Hull
9. Québec
10. St. Catherines-Niagara
11. St. John
12. Toronto
13. Trois-Rivières

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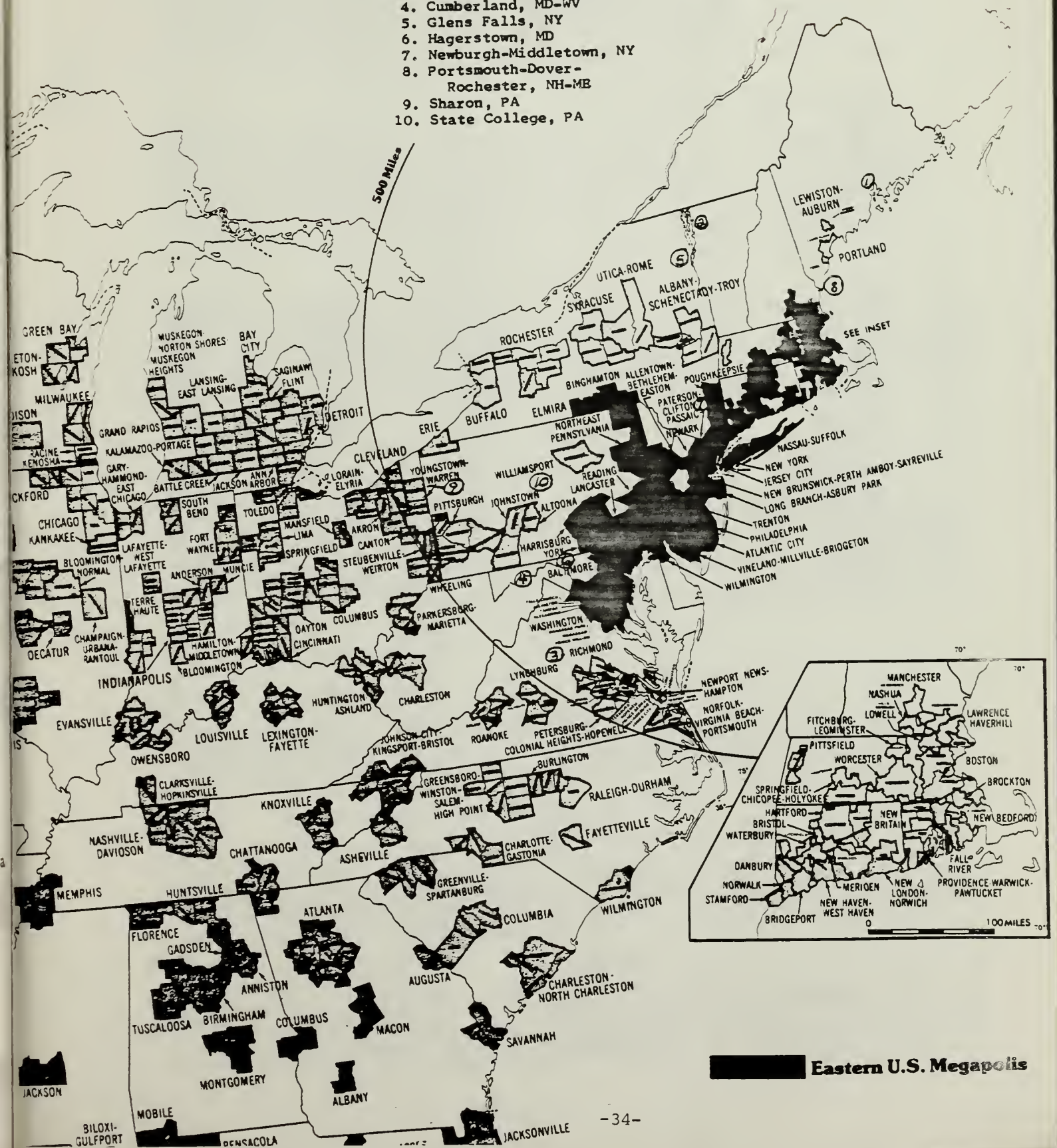
NORTHEAST AMERICAN MARKET
STANDARD METROPOLITAN STATISTICAL AREAS

NEWLY DESIGNATED SMSAs (1981)

1. Bangor, ME
2. Burlington, VT
3. Charlottesville, VA
4. Cumberland, MD-WV
5. Glens Falls, NY
6. Hagerstown, MD
7. Newburgh-Middletown, NY
8. Portsmouth-Dover-Rochester, NH-ME
9. Sharon, PA
10. State College, PA

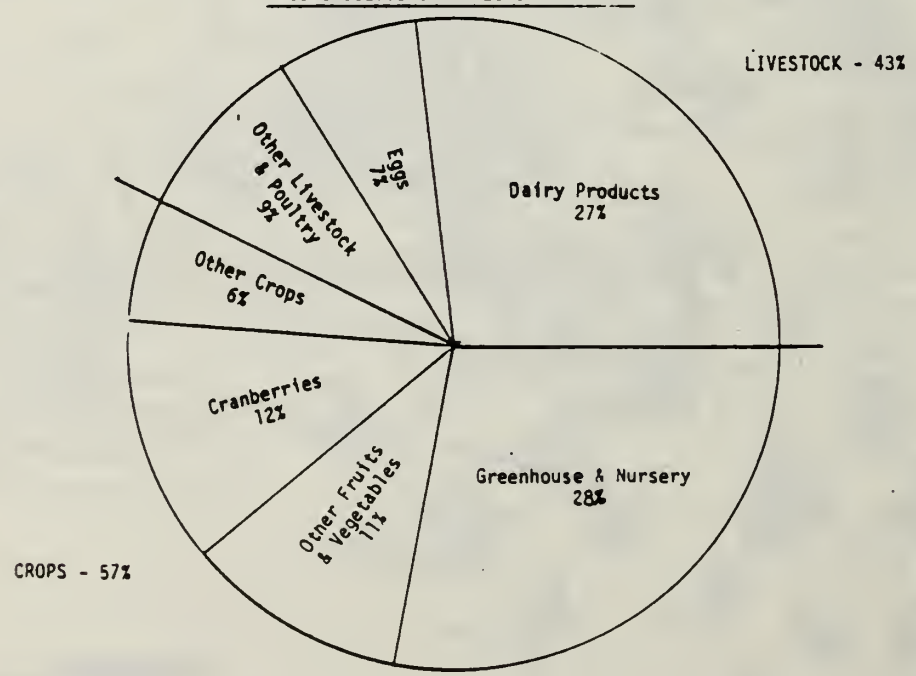


CASH RECEIPTS FROM FARM MARKETING

CASH RECEIPTS FROM FARM MARKETINGS, MASSACHUSETTS, 1979-1981

COMMODITY	1979	1980	1981
		Thousand Dollars	
LIVESTOCK AND LIVESTOCK PRODUCTS			
Cattle and Calves	12,728	13,017	13,100
Hogs	7,841	5,988	5,515
Sheep and Lambs	163	179	161
Dairy Products	73,833	79,726	85,989
Chickens	653	525	817
Eggs	20,638	20,177	22,933
Turkeys	1,820	1,927	2,345
Miscellaneous Poultry	2,573	2,308	2,875
Miscellaneous Livestock	3,189	3,151	3,118
Total Livestock and Livestock Products	123,438	126,998	136,853
CROPS			
Hay	2,463	2,346	2,509
Tobacco	8,404	10,833	14,895
Potatoes	4,153	4,338	5,136
Cabbage	878	1,237	1,465
Sweet Corn	5,817	6,563	8,752
Tomatoes	2,386	3,103	3,276
Miscellaneous Vegetables	3,298	2,345	2,371
Apples	11,799	13,103	12,590
Peaches	544	570	35
Cranberries	27,972	30,562	39,176
Berries	1,611	1,365	1,404
Miscellaneous Fruits	249	260	283
Maple Products	445	313	788
Forest Products	1,308	1,308	1,308
Greenhouse and Nursery	92,447	91,372	90,556
Miscellaneous Crops	231	248	143
Total Crops	164,005	169,866	184,687
TOTAL RECEIPTS	287,443	296,864	321,540

MASSACHUSETTS CASH RECEIPTS - 1981



LOCATIONS OF MAJOR MANUFACTURING GROUPS

(with 490 employees or more in one group)

1979

Appendix F
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SIC 20 Food & Kindred Prod.	SIC 25 Furniture and Fixtures	SIC 28 Chemicals&Allied Prod.	SIC 32 Abrasive & Stone Prod.	SIC 35 (cont.)	SIC 36 (cont.)	SIC 38 Instrument and Allied Prod.
Boston	Boston	Andover	Westborough	Chicopee	Chelmsford	Ashland
Cambridge	Gardner	Boston	Worcester	Dalton	Danvers	Bedford
Canton	Worcester	Cambridge		Deerfield	Fall River	Billerica
Fall River		Easthampton	SIC 33	East Longmeadow	Framingham	Boston
Gloucester	SIC 26	Everett	Primary Metals	Everett	Gloucester	Burlington
Lawrence	Paper and	Leominster	Attleboro	Fitchburg	Hudson	Cambridge
Lowell	Allied Prod.	Peabody	Boston	Gardner	Lawrence	Concord
Lynn	Boston	Pittsfield	New Bedford	Gloucester	Lexington	East Bridgewater
Natick	Chelsea	Springfield	South Hadley	Greenfield	Littleton	Foxborough
New Bedford	Chicopee	Woburn	Springfield	Holyoke	Lowell	Framingham
Wilbraham	Erving	Worcester	Worcester	Lawrence	Lynn	Holyoke
Worcester	Fitchburg			Leominster	Marlborough	Leominster
	Framingham	SIC 30	SIC 34	Lexington	Maynard	Lexington
SIC 22	Holyoke	Plastic&Rubber Prod.	Fabricated Metals	Lowell	Melrose	Lynn
Textiles	Lawrence	Boston	Attleboro	Lynn	Methuen	Medfield
Adams	Lee	Braintree	Boston	Marlborough	Natick	Milford
Boston	Leominster	Canton	Braintree	Maynard	New Bedford	Needham
Brockton	Lowell	Chicopee	Burlington	New Bedford	Newton	New Bedford
Fall River	Palmer	Clinton	Cambridge	Newton	North Adams	Norwood
Lawrence	Peabody	Easthampton	Chicopee	Northbridge	North Andover	Randolph
Lowell	Pittsfield	Fall River	Gardner	Norwood	Norwood	Salem
Needham	South Hadley	Lawrence	Grafton	Quincy	Pittsfield	Southbridge
New Bedford	Springfield	Leominster	Lawrence	Randolph	Salem	Sturbridge
Springfield	Walpole	New Bedford	Malden	Southborough	Springfield	Waltham
Taunton	West Springfield	Taunton	Monson	Springfield	Stoneham	Watertown
Uxbridge	Westfield	Wilmington	New Bedford	Tewksbury	Sudbury	Wilmington
Webster	Worcester	Worcester	Norwood	Wakefield	Waltham	
Worcester			Peabody	Walpole	Watertown	SIC 391-396
	SIC 27	SIC 31	Somerville	Waltham	West Bridgewater	Jewelry &
SIC 23	Printing and	Leather & Leath. Prod.	Southbridge	Warren	West Springfield	Silverware
Apparel & Fin. Goods	Publishing	Agawam	Waltham	Watertown	Weymouth	Attleboro
Boston	Boston	Boston	West Springfield	Wellesley	Wilmington	North Attleborough
Braintree	Cambridge	Brockton	Westfield	Westfield	Woburn	Taunton
Brockton	Fall River	Cambridge	Woburn	Westminster	Worcester	
Burlington	Framingham	Chicopee	Worcester	Wilmington		SIC 394
Cambridge	Holyoke	East Brookfield	Wrentham	Woburn	SIC 37	Sporting Goods,
Douglas	Lawrence	Fall River		Worcester	Transport. Equip.	Games and Toys
Fall River	Lexington	Haverhill	SIC 35		Andover	Acushnet
Fitchburg	Lowell	Lawrence	Machinery (ex. elec.)	SIC 36	Bedford	Chicopee
Lawrence	New Bedford	Lowell	Agawam	Elec. & Elec.	Boston	Salem
Lowell	Plympton	Lynn	Athol	tronics Equip.	Everett	
New Bedford	Quincy	Marlborough	Attleboro	Andover	Framingham	SIC 399
Springfield	Springfield	New Bedford	Beverly	Attleboro	Lowell	Brushes
Taunton	Taunton	Peabody	Billerica	Bedford	Lynn	Northampton
Warren	Westford	Salem	Boston	Beverly	Springfield	
Worcester	Worcester	Webster	Burlington	Boston	Westfield	
		Worcester	Canton	Braintree		
				Burlington		
				Cambridge		

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NONAGRICUTURAL WAGE AND SALARY EMPLOYMENT

INDUSTRY	NOVEMBER 1982 EMPLOYMENT (in thousands)			Revised to 1st Qtr 1981 Benchmark Net change to Current month from:	
	NOV 82	OCT 82	NOV 81	OCT 82	NOV 81
NONAGRICULTURAL EMPLOYMENT	2626.5	2621.8	2676.6	4.7	-50.1
Manufacturing	613.0	617.0	669.4	-4.0	-56.4
Durable Goods	373.6	375.2	410.9	-1.6	-37.3
Lumber & Furniture	11.6	11.4	13.0	0.2	-1.4
Stone,Clay & Glass	11.3	11.5	12.9	-0.2	-1.6
Primary Metals	14.0	13.9	17.1	0.1	-3.1
* Nonferrous rolling & drawing	7.8	7.9	8.9	-0.1	-1.1
Fabricated Metals	44.3	45.0	51.3	-0.2	-6.5
Cutlery,Hand tools,Hardware	10.3	10.2	11.8	0.1	-1.5
* Fabricated structural steel products	8.6	8.6	9.7	0.0	-1.1
Machinery, except electrical	102.2	102.2	109.4	0.0	-7.2
Metalworking machinery	12.9	12.4	16.5	0.5	-3.6
Special industry machinery	13.2	13.1	15.8	0.1	-2.6
* Office & computing machines	51.9	52.1	49.9	-0.2	2.0
Electrical & Electronic machinery,equipment,etc.	106.5	107.4	111.6	-0.9	-5.1
* Electric lighting & wiring equipment	6.9	7.0	8.0	-0.1	-1.1
Communications equipment	32.9	33.5	34.9	-0.6	-2.0
Electronic components	50.7	50.7	51.4	0.0	-0.7
Transportation equipment	29.2	29.4	34.4	-0.2	-5.2
Instruments	54.0	54.4	61.2	-0.4	-7.2
Measuring & Control devices	20.6	20.6	23.2	0.0	-2.6
Nondurable Goods	239.4	241.8	258.5	-2.4	-19.1
Food & kindred products	26.0	25.9	26.2	0.1	-0.2
Textile mill products	20.6	20.7	23.1	-0.1	-2.5
Apparel	35.9	36.4	39.0	-0.5	-3.1
Mens & Boys suits,coats & furnishings	8.9	8.8	9.0	0.1	-0.1
Paper & allied products	26.0	25.8	27.5	0.2	-1.5
Paper	5.1	4.8	5.6	0.3	-0.5
Paperboard containers	7.6	7.7	8.3	-0.1	-0.7
Printing & Publishing	42.7	43.2	45.6	-0.5	-2.9
Newspapers	13.5	13.3	14.1	0.2	-0.6
Chemicals	17.6	17.6	18.3	0.0	-0.7
Rubber & miscellaneous Plastic products	27.3	27.9	29.2	-0.6	-1.9
Miscellaneous Plastic products	20.4	20.9	21.6	-0.5	-1.2
Leather & Leather products	17.8	18.1	20.7	-0.3	-2.9
Footwear, except rubber	10.0	10.2	11.6	-0.2	-1.6
Miscellaneous Manufacturing industries	23.7	24.3	26.8	-0.6	-3.1
Jewelry	9.1	9.2	9.0	-0.1	0.1
* High Technology Industries	231.4	232.9	242.5	-1.5	-11.1
Construction	83.3	84.1	83.6	-0.8	-0.3
Transportation, Communication & Public Utilities	117.7	118.3	120.1	-0.6	-2.4
Electric, Gas, & Sanitary services	18.0	18.0	18.4	0.0	-0.4
Wholesale & Retail trade	581.4	577.1	586.2	4.3	-4.8
* General merchandise stores	62.0	59.3	61.3	2.7	0.7
* Food stores	82.5	79.5	78.5	3.0	4.0
Finance, Insurance & Real Estate	166.4	167.0	164.5	-0.6	1.9
Banking	51.2	51.0	50.3	0.2	0.9
* Mutual savings banks	12.9	12.8	13.1	0.1	-0.2
Insurance	54.4	54.6	53.7	-0.2	0.7
* Life insurance	28.8	30.9	30.2	-2.1	-1.4
Services & Mining	689.6	690.8	676.1	-1.3	13.5
Health Services	222.7	221.6	217.4	1.1	5.3
* Hospitals	125.2	124.7	121.9	0.5	3.3
Educational Services	120.4	116.5	118.7	3.9	1.7
* Colleges and universities	95.9	92.2	95.5	3.7	0.4
Government	375.1	367.4	376.7	7.7	-1.6
Federal	54.9	55.1	56.1	-0.2	-1.2
U.S. Postal Service	20.3	20.3	20.6	0.0	-0.3
* Health services	7.0	7.0	7.1	0.0	-0.1
State	98.1	97.4	96.2	0.7	1.9
* Health services	10.9	10.8	10.9	0.1	0.0
Educational services	31.2	30.2	29.5	1.0	1.7
Local	222.1	214.9	224.4	7.2	-2.3
Educational services	125.7	122.9	128.5	2.8	-2.8

Note: Current month estimate preliminary.
* - Not currently validated by the U.S. Bureau of Labor Statistics.
R - Revised